

CONFIDENTIAL

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Expression of Endogenous Genes by
Non-homologous Recombination
of a Vector Construct With Cellular DNA

Abstract

5 The field of the invention is activating gene expression or causing over-expression of a gene by recombination methods *in situ*. The invention relates to expressing an endogenous gene in a cell at levels higher than those normally found in the cell. Expression of the gene is activated or increased following integration, by non-homologous or illegitimate recombination, of a *vector*
10 regulatory sequence that activates expression of the gene. The method allows the identification and expression of genes undiscoverable by current methods since no target sequence is necessary for integration. Thus, gene products associated with human disease and development are obtainable from genes that have not been sequenced and indeed, whose existence is unknown, as well as from
15 well-characterized genes. The methods provide gene products from such genes for therapeutic and diagnostic purposes. In one embodiment the vector contains a promoter, exon, and splice donor sequence, the exon being derived from a eucaryotic gene.

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